

## Weekly report (2017-10-15 ----- 2017-10-22)

Oct 22<sup>nd</sup>, 2017, 22:03 pm

## 1. Progress

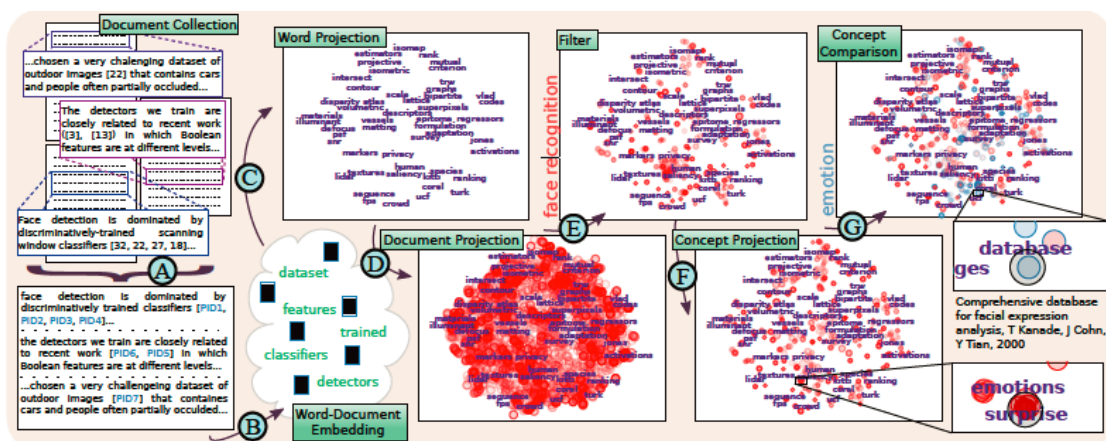
### Table 1. Progress

Tasks	IN PROGRESS	Date
dimensionality reduction		11.30
highway project	made out a schedule	12.10
statistic charts survey	collect papers	12.15
*2Vec survey	read papers	12.30

## 2. Research

## 2.1 Paper reading

1. cite2vec: Citation-Driven Document Exploration via Word Embeddings



In this paper, the authors present a dynamic scheme that can explore and discover document collections via document usage. They

learn an embedding space of words and documents that exhibits linear structure, permitting the semantically meaningful composition of words and documents.

## 2. Discovery of Evolving Semantics through Dynamic Word Embedding Learning

In this paper, the authors mainly focus on learning time-aware vector representation of words through dynamic word embedding modeling. The main technical novelty of this paper is to compute word embeddings and alignments jointly, through solving one overall optimization problem. They provide a framework to evaluate temporal word embeddings from the perspective of evolving semantics discovery.

### 2.2 Collected paper

Collected paper of recent years and classify them by items, including the related survey of statistic charts, scatterplots, histogram, line chart, bar chart, sparkline, Venn diagram and heat map etc.

Related Survey			
序号	年份	论文名	期刊
1	2017	A Survey on Visual Approaches for Analyzing Scientific Literature and Patents	TVCG
2	2015	Survey on Visualization Layout for Big Data	International Conference on

			Intelligent Science and Big Data Engineering
3	2014	Financevis. net: A visual survey of financial data visualizations	Infovis
4	2013	Visualization and Visual Analysis of Multifaceted Scientific Data: A Survey	TVCG
5	2011	Data and information visualization methods, and interactive mechanisms: A survey	International Journal of Computer Applications
6	2011	Survey of Contrast Enhancement Techniques based on Histogram Equalization	International Journal of Advanced Computer Science and Applications
7	2010	Hierarchical Aggregation for Information Visualization: Overview, Techniques, and Design Guidelines	TVCG
<b>ScatterPlots</b>			
序号	年份	论文名	期刊
1	2018	Cluster-based Visual Abstraction for Multivariate Scatterplots	TVCG
2	2017	Scatterplots: Tasks, Data, and Designs	TVCG
3	2017	Towards Perceptual Optimization of the Visual Design of Scatterplots	TVCG
4	2017	Scatteract: Automated extraction of data from scatter plots	ECML PKDD
5	2016	InterAxis: Steering Scatterplot Axes via Observation-Level Interaction	TVCG
6	2016	Gatherplots: Extended Scatterplots for Categorical Data	Journal of Latex Class Files2016
7	2016	The Connected Scatterplot for Presenting Paired Time Series	TVCG
8	2015	Visualnostics: Visual Guidance Pictograms for Analyzing Projections of High-dimensional Data	Computer Graphics Forum
9	2015	Dynamic Opacity Optimization for Scatter Plots	Proceedings of the 33rd Annual ACM

			Conference on Human Factors in Computing Systems
10	2014	Visual abstraction and exploration of multi-class scatterplots	TVCG
<b>Histogram</b>			
序号	年份	论文名	期刊
1	2017	Histogram equalization and specification for high-dimensional data visualization using RadViz	Proceedings of the Computer Graphics International Conference
2	2017	Adaptive Sampling for Rapidly Matching Histograms	arXiv
3	2016	Performance Histogram Curve: Abstractive Visualization and Analysis of NBA Games	International Journal of Software
4	2016	Scalable Visualization of Time-varying Multi-parameter Distributions Using Spatially Organized Histograms	TVCG
5	2015	Hybrid Data Visualization Based on Depth Complexity Histogram Analysis	Computer Graphics Forum
6	2015	Scalable Visualization of Discrete Velocity Decompositions Using Spatially Organized Histograms	LDAV
7	2014	Background subtraction by combining temporal and spatio-temporal histograms in the presence of camera movement	Machine Vision and Applications
8	2014	The Effects of Interactive Latency on Exploratory Visual Analysis	TVCG
9	2013	Integrating Isosurface Statistics and Histograms	TVCG
<b>Line Chart</b>			
序号	年份	论文名	期刊
1	2017	Line Graph or Scatter Plot? Automatic Selection of Methods for Visualizing Trends in Time Series	TVCG
2	2016	Visual Analysis of Cloud Computing Performance Using Behavioral Lines	TVCG

3	2016	TimeNotes: A Study on Effective Chart Visualization and Interaction Techniques for Time-Series Data	TVCG
4	2016	ViDX: Visual Diagnostics of Assembly Line Performance in Smart Factories	VAST
5	2015	An Efficient Framework for Generating Storyline Visualizations from Streaming Data	TVCG
6	2014	Ranking Visualizations of Correlation Using Weber's Law	TVCG

### Bar Chart

序号	年份	论文名	期刊
1	2017	Investigating the Use of a Dynamic Physical Bar Chart for Data Exploration and Presentation	TVCG
2	2017	Readability and Precision in Pictorial Bar Charts	EuroVis
3	2017	Raising the Bars: Evaluating Treemaps vs. Wrapped Bars for Dense Visualization of Sorted Numeric Data	Proceedings of the 43rd Graphics Interface Conference
4	2015	Exploring Interactions with Physically Dynamic Bar Charts	Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems
5	2015	An Evaluation of the Impact of Visual Embellishments in Bar Charts	Computer Graphics Forum
6	2015	Evaluating Multi-Column Bar Charts and Treemaps for Dense Visualization of Sorted Numeric Data	Under review
7	2014	Four Experiments on the Perception of Bar Charts	TVCG

### Sparkline

序号	年份	论文名	期刊
1	2017	Squares: Supporting Interactive Performance Analysis for Multiclass Classifiers	TVCG
2	2014	Attribute Signatures: Dynamic Visual Summaries for Analyzing Multivariate Geographical Data	TVCG

3	2014	Interactive Generation of Visual Summaries for Multivariate Geographical Data Analysis	Eighth International Conference on Geographic Information Science
4	2014	Moving beyond sequential design: Reflections on a rich multi-channel approach to data visualization	TVCG
5	2013	Visual Analysis of Topic Competition on Social Media	TVCG
6	2012	RankExplorer: Visualization of Ranking Changes in Large Time Series Data	TVCG
7	2010	SparkClouds: Visualizing Trends in Tag Clouds	TVCG
8	2006	Beautiful Evidence	Graphics Press LLC
9	2004	Sparklines: Intense, simple	Word-sized graphics

### Venn diagram

序号	年份	论文名	期刊
1	2017	Patterns of multimorbidity in people with severe or profound intellectual and motor disabilities	
2	2016	The State-of-the-Art of Set Visualization	Computer Graphics Forum
3	2015	VennDIS: A JavaFX - based Venn and Euler diagram software to generate publication quality figures	Proteomics
4	2014	A survey of Euler diagrams	Journal of Visual Languages & Computing
5	2014	UpSet: Visualization of Intersecting Sets	TVCG
6	2012	Exact and Approximate Area-Proportional Circular Venn and Euler Diagrams	TVCG
7	2010	Untangling Euler Diagrams	TVCG

### Heat map

序号	年份	论文名	期刊
1	2017	Fauxvea: Crowdsourcing Gaze Location Estimates for Visualization Analysis Tasks View Document	TVCG

2	2017	Data Flow Analysis and Visualization for Spatiotemporal Statistical Data without Trajectory Information	TVCG
3	2017	Design and Evaluation of WebGL-Based Heat Map Visualization for Big Point Data	The Rise of Big Spatial Data
4	2016	Heatmap Explorer: an interactive gaze data visualization tool for the evaluation of computer interfaces	Proceedings of the 15th Brazilian Symposium on Human Factors in Computer Systems Article
5	2016	3D Regression Heat Map Analysis of Population Study Data	TVCG
6	2014	A Heatmap-Based Time-Varying Multi-variate Data Visualization Unifying Numeric and Categorical Variables	IV
7	2014	Maps of Computer Science	PacificVis